

REMARKS

In the last Office Action, claims 1, 5, 6 and 21 were rejected under 35 USC §102(b) as being anticipated by the newly cited reference to Sugiura (USPN 4,339,190), and claims 1 and 2 were rejected under 35 USC §102(b) as being anticipated by the newly cited reference to Shimada (USPN 5,749,014). Claims 3-4 were rejected under 35 USC §103(a) as being unpatentable over Sugiura in view of Tanikawa et al. ("Tanikawa") (USPN 6,485,200). Claim 10 was rejected under 35 USC §103(a) as being unpatentable over Sugiura in view of Takahashi (USPN 6,536,962), and claim 22 was rejected under 35 USC §103(a) as being unpatentable over Sugiura in view of the newly cited reference to Stark et al. ("Stark") (USPN 5,973,399). Claims 7-9, 23 and 24 were objected to as being dependent upon a rejected base claim and were otherwise indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In accordance with this amendment, independent claim 1 has been amended to include the patentable feature of claim 24, i.e., the intermediate member having mounting portions removably mounted to the base plate, and to clarify that the intermediate member is disposed between (i.e., is intermediate) the support plate and the base plate. Claim 24 has been amended to delete therefrom the subject matter added

to base claim 1 thereby conforming dependent claim 24 to base claim 1.

Applicant respectfully submits that the amendments made to claims 1 and 24 do not raise any new issue that would require further search or consideration. Instead, claim 1 has been amended to include the allowable subject matter of claim 24 (see paragraph 9 in the body of the last Office Action) and to make more clear that the intermediate member is positioned between the support plate and the base plate. By definition, an "intermediate" member is one that is intermediate or between two other members. In the present case, the intermediate member 6 is between the support plate 3 and the base plate 1. This disposition of the intermediate member was implicit in rejected claim 1, especially when the claim is read in light of the disclosure, and the present amendment makes explicit this disposition and further clearly differentiates the claim from the prior art. As claim 1 has otherwise been amended to incorporate the allowable subject matter of claim 24, the further amendment of the claim to explicitly locate the intermediate member between the support plate and the base plate does not raise a new issue and also further patentably distinguishes the claim from the prior art. Applicant, therefore, respectfully urges entry of this amendment, which is believed proper under the provisions of 37 CFR §1.116.

Applicant acknowledges with appreciation the Examiner's indication of allowable subject matter concerning claims 7-9 and 23-24. In addition, for the reasons explained below, applicant respectfully submits that claims 1-6, 10 and 21-22 are also allowable.

The present invention embraced by claims 1-10 and 21-24 pertains to a sector drive assembly for a camera comprised of a sector unit and a sector driving unit that are removably connected together to enable simple removal, repair and replacement of one unit relative to the other and to permit the use of a universal driving unit with various types of sector units.

In accordance with one preferred embodiment of the invention shown in the drawings and embodied in the claims, the sector drive assembly comprises a sector unit U having a base plate 1 having an aperture 1a, and one or more sectors 12 for opening and closing the aperture; and a sector drive unit D having a support plate 3, an electromagnetic actuator 4 mounted to the support plate 3, an intermediate member 6 interposed between the support plate 3 and the base plate 1 and removably mounted to the base plate 1 by mounting portions 6f, 6g for retaining the electromagnetic actuator 4 in a predetermined position between the support plate and the intermediate member, and a drive force transmitting mechanism T mounted to the support plate 3 for transmitting a drive

force of the electromagnetic actuator 4 to the one or more sectors 12. In accordance with the invention, the sector drive unit D is removably mountable as a unit to the base plate 1 of the sector unit U.

As shown in Figs. 3-4, the intermediate member 6 is detachably connected to the support plate 3 by, for example, latch devices 3b, 3b. Once connected together, the intermediate member 6 retains the electromagnetic actuator 4 and the drive force transmitting mechanism T in predetermined positions between the support plate 3 and the intermediate member 6. The mounting portions 6f, 6g are provided on the bottom face of the intermediate member 6, as viewed in Fig. 3, and are removably mounted to the upper face of the base plate 1, and fixing members, such as fasteners 10, 10, are insertable through the base plate 1 and engageable with respective ones of the mounting portions 6f, 6g to removably mount the sector drive unit D to the sector unit U. In this manner, the sector drive unit may be quickly and easily removed as a unit from the sector unit.

Amended independent claim 1 recites a sector drive assembly for a camera comprising a sector unit which comprises a base plate having an aperture and one or more sectors for opening and closing the aperture; and a sector drive unit comprising a support plate, an electromagnetic actuator mounted to the support plate, an intermediate member disposed

between the support plate and the base plate for retaining the electromagnetic actuator in a predetermined position between the support plate and intermediate member, the intermediate member having mounting portions removably mounted to the base plate, and a drive force mechanism mounted to the support plate for transmitting a drive force of the electromagnetic actuator to the one or more sectors, the sector drive unit being removably mountable as a unit to the base plate. No corresponding structure is disclosed or suggested by the prior art.

The newly cited reference to Sugiura applied against independent claim 1 discloses a sector drive assembly for a camera having a sector unit 1 having a base plate 4 and a sector drive unit 2. The sector drive unit 2 comprises a base plate (support plate) 10 (Fig. 3), a figure-8-shaped yoke 25 which serves as a casing for an electromagnetic actuator 42, a dustproof cover 23 covering the exposed upper portion of the yoke/casing 25 (column 3, lines 6-9), and a drive force transmitting mechanism mounted to the support plate 10. The Sugiura sector drive assembly is fundamentally different from that of the present invention in several respects.

In the present invention, as recited in independent claim 1, an intermediate member is disposed between the support plate and the base plate for retaining the electromagnetic actuator in a predetermined position between

the support plate and the intermediate member. In Sugiura, the dustproof cover 23 is not disposed between the support plate 10 and the base plate 4 but rather is disposed atop the yoke/casing 25 to close the casing (Figs. 1 and 3).

Moreover, the dustproof cover 23 does not retain the electromagnetic actuator in a predetermined position between the support plate 10 and the cover but rather the projected portion 23' of the cover 23 simply holds the current supply brush 22 (column 3, lines 9-11).

In addition, the dustproof cover 23 does not have mounting portions removably mounted to the base plate 4 as is readily apparent from the drawings.

It is clear, therefore, that the dustproof cover 23 of Sugiura is provided for a different purpose and functions in a different manner and does not correspond in any sense to the intermediate member of claim 1. This has been recognized by the Examiner in his statement of reasons for the indication of allowable subject matter, namely, the "prior art fails to teach...that the intermediate member has mounting portions removably mounted to the base plate."

Applicant respectfully submits that independent claim 1 together with the claims dependent thereon clearly patentably distinguish over Sugiura, whether considered alone or in combination with the other references of record, and thus the rejection based on Sugiura has been overcome.

Independent claim 1 together with claim 2 has also been rejected as being anticipated by the newly cited reference to Shimada. Applicant respectfully traverses this rejection and submits that amended independent claim 1 patentably differentiates from Shimada.

Shimada discloses in Fig. 8 a sector drive assembly for a camera comprised of a sector unit having a base plate 38 and one or more sectors 39; and a sector drive unit having a support plate 44, an electromagnetic actuator 41-43 mounted to the support plate 44, an intermediate member (unnumbered) opposed to the support plate 44 for retaining the actuator in a predetermined position, and a drive force transmitting mechanism removably mounted to the base plate 38.

Applicant respectfully submits that the Examiner has apparently overlooked the fact that claim 1 requires that the drive force transmitting mechanism be mounted to the support plate of the sector drive unit, not to the base plate of the sector unit. In Shimada, the drive force transmitting mechanism, as acknowledged by the Examiner, is mounted as a unit to the base plate (see Fig. 8), whereas the electromagnetic actuator 41-43 is mounted to the support plate 44.

In addition, Shimada, like Sugiura, does not disclose the intermediate member recited in claim 1. In construing Shimada, the Examiner states that the plate member

(unnumbered) that covers the top of the electromagnetic actuator 41-43 corresponds to the claimed intermediate member; however, this plate member is not disposed between the support plate 44 and the base plate 38 but rather, like in Sugiura, is a cover plate that covers the top of the electromagnetic actuator 41-43 and supports only the shaft of the rotor 41. Moreover, this unnumbered plate does not having mounting portions that are removably mounted to the base plate 38, as required by claim 1. As acknowledged by the Examiner in the statement of reasons for the indication of allowable subject matter, the prior art (including Shimada) fails to teach the claimed combination in conjunction with an intermediate member that has mounting portions removably mounted to the base plate.

In view of the foregoing, applicant submits that independent claim 1 together with the claims dependent thereon clearly patentably distinguish over Shimada, whether considered alone or in conjunction with the other prior art of record. Accordingly, reconsideration and withdrawal of the anticipatory rejection based on Shimada are respectfully requested.

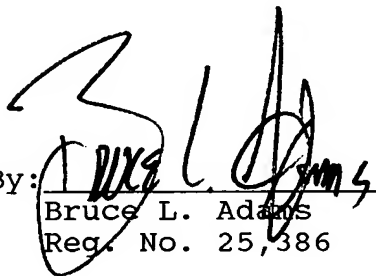
In view of the foregoing, the application is now believed to be in allowable form. Accordingly, favorable reconsideration and entry of this amendment together with passage of the application to issue are respectfully

requested.

In the event the Examiner determines that something further need be done to place the application in allowable form, it is respectfully requested that the Examiner telephone the undersigned attorney so that any outstanding matter can be promptly attended to.

Respectfully submitted,

ADAMS & WILKS
Attorneys for Applicants

By: 
Bruce L. Adams
Reg. No. 25,386

17 Battery Place
Suite 1231
New York, NY 10004
(212) 809-3700

MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Mail Stop AF, COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

Shawn Salahian

Name



Signature

July 3, 2006

Date